

App. No. 10/699,943
Reply to Office Action of 8/8/2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1 and 3 are amended.

Claim 2 is canceled.

Listing of Claims:

1. (Currently Amended) A heat storage apparatus comprising:

a heat storage material accommodation cell for accommodating therein a heat storage material having an electricity conductive characteristic and configured to be electrically heated; and

a fluid passageway for allowing a heat exchanging fluid to flow therethrough, the fluid passageway being adjacent to the heat storage material accommodation cell via a bulkhead,

wherein heat held in the heat storage material is transferred to the heat exchanging fluid so as to be taken out of the heat storage apparatus, and

wherein the heat storage material accommodation cell and the fluid passageway are put in a spiral configuration together with the bulkhead in a heat storage main body of the heat storage apparatus, the heat exchanging fluid flowing in a spiral manner along the fluid passageway having the spiral configuration,

wherein the heat storage material has a property in which electric resistance increases drastically when the heat storage material changes its phase from a solid to a liquid.

2. (Canceled)

3. (Currently Amended) A heat storage apparatus as set forth in Claim 1, comprising:

a heat storage material accommodation cell for accommodating therein a heat storage material having an electricity conductive characteristic and configured to be electrically heated; and

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a fluid passageway for allowing a heat exchanging fluid to flow therethrough, the fluid passageway being adjacent to the heat storage material accommodation cell via a bulkhead,

wherein heat held in the heat storage material is transferred to the heat exchanging fluid so as to be taken out of the heat storage apparatus,

wherein the heat storage material accommodation cell and the fluid passageway are put in a spiral configuration together with the bulkhead in a heat storage main body of the heat storage apparatus, the heat exchanging fluid flowing in a spiral manner along the fluid passageway having the spiral configuration, and

wherein the heat storage main body is a cylindrical body in which the heat storage material accommodation cell and the fluid passageway are made to open in both end faces thereof, and wherein both the end faces of the cylindrical body are closed with a top lid and a bottom lid, respectively.

4. (Original) A heat storage apparatus as set forth in Claim 3, wherein the heat storage main bodies are arranged in series via an intermediate plate.

5. (Original) A heat storage apparatus as set forth in Claim 3, wherein an energizing lead pattern is provided on at least one of the lids, the lead pattern including a spiral pattern.

6. (Original) A heat storage apparatus as set forth in Claim 4, wherein an energizing lead pattern is provided on at least one of the lids and the intermediate plate, the lead pattern including a spiral pattern.